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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,650	09/08/2003	Larry J. Pacey	47079-00134USPT	2836
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JENKENS & GILCHRIST, P.C. 225 WEST WASHINGTON SUITE 2600 CHICAGO, IL 60606				
			EXAMINER HOEL, MATTHEW D	
			ART UNIT 3713	PAPER NUMBER

DATE MAILED: 11/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/657,650	PACEY ET AL.	
	Examiner	Art Unit	
	Matthew D. Hoel	3713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 7/28/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☒ Claim(s) 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/8/2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The declaration filed on July 28th, 2005 under 37 CFR 1.131 is sufficient to overcome the Brosnan (pre-grant publication 2004/0002380 A1, application 10/187,343, filed June 27th, 2002) reference.

Response to Arguments

2. Applicant's arguments, see "Remarks," filed July 28th, 2005, with respect to the rejection(s) of claim(s) 1 to 22 under 35 U.S.C. §§ 102(e) and 103(a) have been fully considered and are persuasive. Therefore, the rejections based on Brosnan have been withdrawn. The examiner acknowledges priority from provisional application 60/410,039, filed Sept. 12, 2002. All of the claims as currently amended are supported by the provisional application. The applicants have demonstrated from their declaration and exhibits that they had the invention in their possession at least as early as April 17th, 2002. However, upon further consideration, a new ground(s) of rejection is made in view of Luciano ('895), Oshima ('446), and French ('565).

Claim Objections

3. Claim 13 is objected to because of the following informalities: "simulation world data" should read "simulation rule data" to be consistent with the previous correction to Claim 1. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

5. A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

7. Determining the scope and contents of the prior art.
8. Ascertaining the differences between the prior art and the claims at issue.
9. Resolving the level of ordinary skill in the pertinent art.
10. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claims 1, 2, 5, 7, 15, 17, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Luciano, et al. (U.S. patent 6,050,895 A) in view of Oshima (U.S. patent 6,045,446 A).

12. As to Claim 1: Luciano in '895 discloses all of the elements of Claim 1, but lacks specificity as to processing physical object data and simulation rule data, and realistically depicting gaming activity on a display. Luciano in '895 teaches a gaming machine (Fig. 1A) with means for accepting a wager (coin acceptor 106, bill validator 108, and card reader 112, Fig. 1A). '895 has a display (104, Fig. 1A). '895 has a means for cashing out the payoff based on an outcome of the gaming activity (3, Fig. 3; Col. 10, Line 67 to Col. 11, Line 1). The game of '895 has a central controller 512 (Fig.

5; Col. 11, Lines 42 to 46). Oshima, however, in '446 teaches physical object data, simulation rule data, and producing a realistic depiction of gaming activity on a display. '446 has physical object data (coordinates, Figs. 3A-C and 4A-H). '446 also has simulation rule data (calculating means, result information setting means, decision means, graphic command issuing means, variable setting means, linear and angular displacement acquiring means, and polygon information managing means, Fig. 2). '446 has a realistic depiction of gaming activity on the display (hammer-throwing field athlete, Figs. 5A-D). It would be obvious to one of ordinary skill in the art to apply the realistic depiction, physical object data, and simulation rule data of '446 to '895. The hammer-throwing game of '446 is a game of skill. '446 controls the throwing body (athlete) in response to commands from manual operation of the controller and controls the object to be hurled (hammer) in response to commands from manual operation of the controller (Col. 3, Lines 17 to 22). The game of '895 is a hybrid game, at least one part of which involves hand-eye coordination and dexterity (Col. 2, Lines 5 to 15), like the hammer-throwing game of '446. The joystick (118, Fig. 1A) of '895 would be appropriate for controlling the game of '446. The coordination/dexterity portion of '895 can be a sports game (Col. 5, Lines 28 to 31). The advantage of this combination would be to provide a sports-oriented coordination game with a familiar theme such as hammer throwing to stimulate players' interest in playing the gaming machine.

13. As to Claim 2: '446 has a 3-D processor (10, Fig. 1) interacting with the central processor (1, Fig. 1) to facilitate the production of real-world gaming activity on the display (Figs. 5A-D).

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14. As to Claim 5: The gaming machine of '446 depicts a three-dimensional simulation of a hammer-throwing event (Figs. 5A-D).

15. As to Claim 7: The gaming activity of '446 is a sport (track and field), and the physical object data refers to a participant in a hammer-throwing event (Figs. 5A-D).

16. As to Claim 15: Luciano in '895 teaches a gaming machine (Fig. 1A) with means for accepting a wager (coin acceptor 106, bill validator 108, and card reader 112, Fig. 1A). '446 simultaneously simulates and displays in real time an interaction of simulated physical objects using representations of three-dimensional forms (Figs. 5A-D). '895 teaches evaluating if an outcome meets winning conditions and awarding a payoff if the outcome meets the winning conditions (334, 336, 337, and 338, Fig. 3).

17. As to Claim 17: '895 teaches comparing the game outcome to a set of predefined outcomes and awarding a payoff if the game outcomes meet the winning criteria (334, 336, 337, and 338, Fig. 3).

18. As to Claim 19: '895 teaches a game of chance that can be roulette (Col. 10, Lines 42 to 46).

19. As to Claim 20: '446 simultaneously simulates and displays a sports game (Figs. 5A-D).

20. Claims 3, 4, 6, 8 to 14, 16, 18, 21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Luciano ('895) and Oshima ('446) in view of French, et al. (U.S. patent 6,308,565 B1).

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21. As to Claim 3: The combination of Luciano ('895) and Oshima ('446) discloses all of the elements of Claim 3, but lacks specificity as to the physical object data including mass and dimensions of at least one simulated object. French, however, in '565 teaches physical object data including mass and dimensions. The physical object data of '565 include mass (Col. 16, Line 62 to Col. 17, Line 8). The player wears beacons or reflectors on his or her body that allow the system to capture movement information (Col. 36, Lines 18 to 50), and the system reports the player's displacement, velocity, and acceleration in absolute terms (Col. 12, Lines 4 to 17), so the data inherently contain the player's physical dimensions. It would be obvious to one of ordinary skill in the art to apply the physical object data of '565 to the combination of '895 and '446. The object data of '565 can be applied to track and field events (Col. 1, Lines 35 to 40; Col. 9, Lines 22 to 24), like the hammer-throwing event of '446. '565 realistically depicts the game event on a display (Col. 8, Lines 23 to 34 and 43 to 52), like '446 (Figs. 5A-D). The advantage of this combination would be to make the depiction of the athletes as realistic as possible by using physical data acquired from actual athletes' performances.

22. As to Claim 4: '565 is capable of providing a virtual reality experience simulating forces encountered by the athlete in real playing conditions (Col. 36, Lines 52 to 58). These forces can include resistance from treading through snow, mud, or waist-deep water encountered in outdoor environments (Col. 37, Lines 45 to 49). This information can be used for simulated gaming rule data that interact with the physical object data of the player.

23. As to Claim 6: The processor of '565 is adapted to mathematically model physical object data and the simulation rule data, and then enable a realistic depiction on the display (Col. 8, Lines 23 to 52).

24. As to Claim 8: Luciano in '895 teaches a gaming machine (Fig. 1A) with means for accepting a wager (coin acceptor 106, bill validator 108, and card reader 112, Fig. 1A). Oshima in '446 teaches accessing physical object data, simulation rule data, and producing a realistic depiction of gaming activity on a display. '446 has physical object data (coordinates, Figs. 3A-C and 4A-H). '446 also has simulation rule data (calculating means, result information setting means, decision means, graphic command issuing means, variable setting means, linear and angular displacement acquiring means, and polygon information managing means, Fig. 2). French in '565 teaches mathematically modeling physical object data and the simulation rule data, and then realistically depicting game actions on a display (Col. 8, Lines 23 to 52). '895 teaches evaluating if game actions meet winning conditions and awarding a payoff if game actions meet the winning conditions (334, 336, 337, and 338, Fig. 3).

25. As to Claim 9: '565 accesses motion capture data and uses the data while displaying the visual depiction (Col. 8, Lines 23 to 52).

26. As to Claim 10: '565 mathematically models games actions, namely sports actions (Col. 1, Lines 35 to 43).

27. As to Claim 11: '565 applies simulation rule data to physical object data to result in a mathematical model of real-world physical object interactions (Col. 36, Lines 52 to 58; Col. 37, Lines 45 to 48; Col. 8, Lines 23 to 52).

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28. As to Claim 12: '565 defines physical object data by mass (Col. 16, Line 62 to Col. 17, Line 8; Col. 12, Lines 4 to 17; Col. 36, Lines 18 to 47).

29. As to Claim 13: '565 mathematically represents real-world forces (Col. 36, Lines 52 to 58; Col. 37, Lines 45 to 49).

30. As to Claim 14: In '565 the system 560 of Fig. 27 can display moguls, tree branches, other skiers, etc. to realistically simulate a ski slope. The apparent speed of movement is varied as the subject moves to avoid obstacles (Col. 38, Lines 33 to 39).

31. As to Claim 16: '565 simultaneously simulates and displays an interaction of physical objects using simulation rule data to determine an interaction of simulated physical objects using physical object data (Col. 8, Lines 23 to 52; Col. 36, Lines 52 to 58; Col. 37, Lines 45 to 48).

32. As to Claim 18: '565 simultaneously simulates and displays physical interactions (Col. 8, Lines 23 to 52). '565 teaches a physics engine in the form of software (Col. 8, Lines 23 to 52; Col. 12, Lines 4 to 17; Col. 36, Lines 52 to 58).

33. As to Claim 21: '565 can be used to model physical interactions in basketball (Col. 26, Lines 50 to 51).

34. As to Claim 22: Luciano in '895 teaches a gaming machine (Fig. 1A) with means for accepting a wager (coin acceptor 106, bill validator 108, and card reader 112, Fig. 1A). '565 teaches a physics engine in the form of software (Col. 8, Lines 23 to 52; Col. 12, Lines 4 to 17; Col. 36, Lines 52 to 58); the physics engine of '565 uses physical object data and simulation rule data to numerically simulate an interaction of physical objects. '446 renders a visual display of a simulated interaction using two-dimensional

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representation of three-dimensional forms (Figs. 5A-D). '895 teaches evaluating if an outcome of an interaction meets winning criteria and awarding a payoff if the outcome meets the winning criteria (334, 336, 337, and 338, Fig. 3).

Citation of Pertinent Prior Art

35. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Luciano, et al. in U.S. patent 6,267,669 B1 teach a hybrid gaming apparatus. Tanaka, et al. in U.S. patent 6,256,040 B1 teach a three-dimensional game machine. Sidley in U.S. patent 4,926,327 A teaches a computerized gaming system that presents card games in a three-dimensional format. Fentz, et al. in U.S. patent 5,775,993 A teach a roulette gaming machine. Togami in U.S. patent 6,371,849 B1 teaches a volleyball game system. Furusu, et al. in pre-grant publication 2002/0042703 A1, application 09/968,547 teach a whole human body model. Kim, et al. in pre-grant publication 2002/0019258 A1, application 09/881,066, teach evaluating motion data in a motion game apparatus. Furusu, et al. in pre-grant publication 2002/0016700 A1, application 09/860,710, teach a whole human body model. Hayama, et al. in U.S. patent 6,343,987 B2 teach an image-processing device. Rimoto, et al. in U.S. patents 6,340,332 B1 and 6,257,983 B1 teach a ball-playing game. Sata in U.S. patents 6,323,895 B1 and 6,304,267 B1 teaches an image-generating system. Handelman, et al. in U.S. patent 6,191,798 A teach computer animation involving limb coordination. Asai, et al. in pre-grant publication 2001/0001091 A1, application 09/753,963, and U.S. patent 6,231,443 A teach a method of replaying a game. Roelofs in pre-grant publication 2001/0003712 A1, application 09/002,143, teaches an exoskeletal platform for controlling avatars in a virtual environment.

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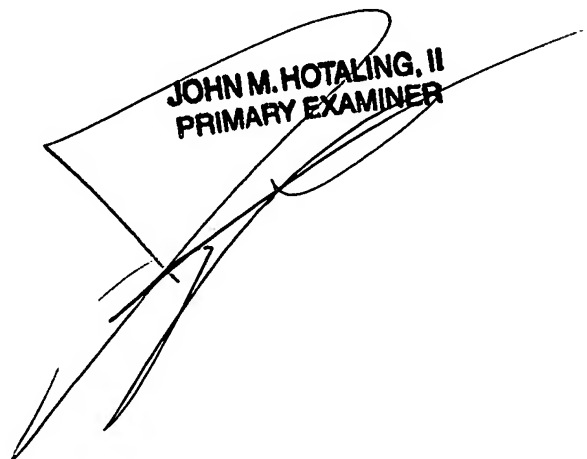
Conclusion

36. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew D. Hoel whose telephone number is (571) 272-5961. The examiner can normally be reached on Mon. to Fri., 8:00 A.M. to 4:30 P.M.

37. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xuan M. Thai can be reached on (571) 272-7147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

38. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Matthew D. Hoel, Patent Examiner
AU 3713



JOHN M. HOTALING, II
PRIMARY EXAMINER